UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,236	09/26/2005	Shengyang Huang	F-8417	1828

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the Office Action mailed 11/25/08, Applicants have submitted an

Amendment, filed 4/28/09, amending claims 1-18.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 1-8 and 17 rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

Claims 1-8 and 17 are rejected under 35 USC 101 as not being directed to statutory

subject matter. Although the claims appear to be directed to a machine ("computer"), the

disclosure in the specification describes the various limitations of the invention as corresponding

software or programs. Computer programs claimed as the description or expressions of the

programs are not physical "things." Since the claims merely provide a nominal recitation of a

computer without positively reciting any physical structure in conjunction with the system or a

computer, the claims are treated as being directed entirely to a software embodiment, and

therefore do not define a statutory machine or thing.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

4.   **Claims 1-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al

(US Patent Number 2004/0098245), hereinafter referenced as Walker, in view of de Hita et al.

(USPN 6,411,924), hereinafter referenced in view of de Hita.

Regarding **claims 1 and 9**, Walker discloses a conversation control computer and method

which retrieves based on input information received from a user, a reply sentence to the input

information [paragraphs (p) 0030-0042], comprising: a morpheme extracting unit configured to

extract, based on a character string corresponding to the input information, at least one

morpheme constituting a minimum unit of the character string, as first morpheme information

(Figure 9, elements 930 and 940); a conversation database configured to store pieces of second

morpheme information each including a morpheme including a character, a string of characters

or a combination thereof, and a plurality of reply sentences, which are associated with the

pieces of second morpheme information (paragraph 0030; Figure 9 elements 150 and 160); a

reply retrieval unit configured to retrieve a reply sentence associated with the piece of second

morpheme information (Figure 9, elements 120 and 130; paragraph 82). Walker discloses

[paragraph 82] the system can be used in conjunction with numerous systems to include parts

ordering systems, customer care systems, reservation systems (including dining, car, train,

airline, bus, lodging, travel, touring, etc.), navigation systems, information collecting systems,

information retrieval systems. Walker fails to disclose the details of the retrieval systems to

include a topic search unit configured to compare, based on the first morpheme information

extracted at the morpheme extracting unit, the first morpheme information with the pieces of

second morpheme information, and to search a piece of second morpheme information

corresponding to the first morpheme information from among the pieces of second morpheme

information.   De Hita discloses (col. 3, lines 10-26; col. 14, lines 54-66 -- "topic modifier";

Figures 7-8; col. 15, line 9 to col. 16, line 55; col. 17, line 30 to col. 19, line 66) a computer-

implemented information analysis and display system and method that dynamically generates

and displays topics representing a linguistic content of documents that are searched based on

one or more of the topics selected by the user. It would have been obvious to one of ordinary

skill at the time of the invention to modify the system of Walker to implement the information

retrieval system of de Hita for the purpose of achieving the system sentence planning and task

classification for information retrieval, as suggested by Walker.

Regarding **claims 2 and 10**, the combination of Walker and de Hita disclose a

conversation control computer and method further comprising: an input type determining unit

configured to determine, based on the character string corresponding to the input information,

wherein the reply sentences are each associated with types of responses and the reply retrieval

unit is configured to compare, based on the piece of second morpheme information searched at

the topic search unit, the types of responses associated with the piece of second morpheme

information searched at the topic search unit the determined type of input, to search a type of

response corresponding to the type of input, to search a type of response corresponding to the

type of input from among the types of response, and to retrieve a reply sentence associated with

the retrieved type of response (Walker-paragraph 41).

Regarding **claims 3 and 11**, the combination of Walker and de Hita disclose a

conversation control computer and method further comprising: a topic identification information

search unit configured to compare, based on the first morpheme information extracted at the

morpheme extracting unit, the first morpheme information with pieces of topic identification

information from among the pieces of topic identification information; wherein, the pieces of

topic identification information are each associated with the pieces of second morpheme

information; the topic search unit is configured to compare, based on the piece of topic

identification information searched at the topic identification information search unit, pieces of

second morpheme information associated with the piece of topic identification information with

the first morpheme extracting unit, and to search a piece of second morpheme information

corresponding to the first morpheme information from among the pieces of second morpheme

information associated with the searched piece of topic identification information (Walker –

paragraph 82; de Hita - col. 14, line 34 to col. 17, line 29).

Regarding **claims 4 and 12**, the combination of Walker and de Hita disclose a

conversation control computer and method further comprising: a supplemental unit (add)

configured to add the piece of topic identification information searched at the topic identification

information searched at the topic identification information search unit to the first morpheme

information extracted at the morpheme extracting unit to provide a supplemental first morpheme

information, when no piece of second morpheme information corresponding to the extracted

first morpheme information can be searched at the topic search unit; wherein, the topic search

unit is configured to search (subject), based on the supplemented first morpheme information, a

piece of second morpheme information corresponding to the first morpheme information from among the pieces of second morpheme information (de Hita - col. 14, line 34 to col. 17, line 29).

Regarding **claims 5 and 13**, the combination of Walker and de Hita disclose the conversation control computer and method further comprising: a ranking unit configured to perform ranking according to the frequency of search of a piece of second morpheme information at the topic search unit wherein, the pieces of second morpheme information are each associated with a plurality of reply sentences; and the reply retrieval unit is configured to compare the priority levels associated with the reply sentences with the rank determined at the ranking unit, to identify a priority level corresponding to the rank from among the priority levels, and to retrieve a reply sentence associated with an identified priority level ([p0055 – sentence ranker; col. 9, line 40- col. 11, line 47 - linguistic filter).

Regarding **claims 6 and 14**, Walker does not specifically teach a computer and method wherein: the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest. de Hita discloses a system and method further comprising the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest (column 15, lines 10-20 with column 18, lines 23-67 and claim 24), to obtain linguistic relevance.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walker's system and method wherein it further comprises the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest, as taught by de Hita, to enable a user to

efficiently and intuitively select, filter, or browse through a group of selected documents based on their linguistic content (column 9, lines 40-43).

Regarding **claims 7 and 15**, Walker does not specifically teach a computer and method wherein: the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts; and the topic identification information search unit is configured to compare, based on the first morpheme information extracted at the morpheme extracting unit, the extracted first morpheme information with pieces of topic identification information related to the previously searched piece of topic identification information as superordinate concepts, and to search a piece of topic identification information corresponding to the morpheme constituting the first morpheme information from among the pieces of topic identification information. de Hita discloses a system and method further comprising: the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts (subordinate topic; column 10, lines 1-9); and the topic identification information search unit is configured to compare (matches), based on the first morpheme information extracted at the morpheme extracting unit, the extracted first morpheme information with pieces of topic identification information related to the previously searched piece of topic identification information as superordinate concepts (superior), and to search a piece of topic identification information corresponding to the morpheme constituting the first morpheme information from among the pieces of topic identification information (column 10, lines 1-42 with col. 15, line 9 to col. 19, line 66; column 20, lines 37-49), so that the user may efficiently and intuitively identify a topic as being a subtopic of a superior topic of a subordinate topic. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify Walker's system and method wherein it further comprises predetermined relationships as superordinate or subordinate concepts, as taught by de Hita, therefore, a user may efficiently and intuitively identify topics in accordance with their importance in the selected documents and also with knowledge of the relationships among such topics (column 10, lines 1-9).

Regarding **claims 8 and 16**, Walker does not specifically teach wherein: the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts; and when retrieving a piece of topic identification information corresponding to the morpheme constituting the first morpheme information , the topic identification information search unit is configured to search another piece of topic identification information associated with a piece of topic identification information which is a superordinate concept to the searched piece of topic identification information. de Hita teaches a system wherein: the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts (subordinate; column 10, lines 1-9); and when retrieving a piece of topic identification information corresponding to the morpheme constituting the first morpheme information (morphological analysis; column 9, lines 40-59 with column 15, lines 21-35), the topic identification information search unit is configured to search another piece of topic identification information associated with a piece of topic identification information which is a superordinate concept to the searched piece of topic identification information (column 10, lines 1-42; col. 15, line 9 to col. 19, line 66; column 20, lines 37-49), that the user may efficiently and intuitively identify a topic as being a subtopic of a superior topic of a subordinate topic.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Hirose's system and method wherein the pieces of topic identification

information are associated with one another in predetermined relationships as superordinate

concepts or subordinate concepts; and

when retrieving a piece of topic identification information corresponding to the morpheme

constituting the first morpheme information, the topic identification information search unit is

configured to search another piece of topic identification information associated with a piece of

topic identification information which is a superordinate concept to the searched piece of topic

identification information, as taught by de Hita, therefore, a user may efficiently and intuitively

identify topics in accordance with their importance in the selected documents and also with

knowledge of the relationships among such topics (column 10, lines 1-9).

Regarding **claims 17 and 18**, the combination of Walker and de Hita further disclose

types of input include affirmation or negation [paragraph 0041].

Response to Arguments

5.   Applicant's arguments filed April 28, 2009, have been fully considered but they are not

persuasive.

6.   Applicant argues de Hita also fails to disclose details of a retrieval system for a topic

search unit as recited in the claims. The Examiner respectfully disagrees since de Hita describes

the functionality of the Linguistic topic analyzer, which represents the linguistic content of some

grammatical units by certain predefined, special, head topics and topic modifiers, or special

topics and special topic modifiers. De Hita describes the special topics and special topic

modifiers are associated with entries in a morphosyntactic dictionary, and provides an

illustration, using the word "Novell," which appears in one or more of the documents stored in

the document buffer.   The system functions such that, the word "Novell" corresponds to an entry

in the morphosyntactic dictionary that identifies such word as being represented by the special

head topic "organizations," and by the special topic modifier "companies" under such head topic.

So, the word "Novell" is determined by linguistic topic analyzer to be a special topic modifier of

the special topic modifier "companies" of the special head topic "organizations."

7.   Applicant argues de Hita's system is not directed to a system where the search is

performed by the computer alone. Applicant also argues Walker fails to disclose any details of

the configuration or the organizational hierarchy of the discourse history-database (150) and the

training database 160, particularly that reply sentences are associated with pieces of second

morpheme information.   Applicant also argues Walker fails to disclose retrieval of reply

sentences based upon comparisons of morpheme information as recited in the claims. In

response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).   In this instance, since Walker

teaches an automated retrieval system, and de Hita discloses a computer-implemented

information analysis and display system and method that dynamically generates and displays

topics representing a linguistic content of documents that are searched based on one or more of

the topics (or morpheme information) selected by the user, the combination of Walker and de

Hita provide support for the recited limitations as indicated in the rejection above.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ANGELA A. ARMSTRONG whose telephone number is

(571)272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Angela A Armstrong/
Primary Examiner, Art Unit 2626